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Citation for published version (APA):

Holden, K., & Jensen, N. (2016). From Under the Wheels of the Juggernaut: Global Health Networks, Gold Standards and the Possibilities for Social Science Critique. *SCIENCE AS CULTURE*, 26(1), 124-132.
<https://qmro.qmul.ac.uk/xmlui/handle/123456789/19687>

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###V2, 14.09.2016, 3.4k words

From under the wheels of the juggernaut: global health networks, gold standards and the possibilities for social science critique

Kerry Holden¹ and Nele Jensen²

¹Kerry Holden is a human geographer in the School of Geography, Queen Mary, University of London. She is currently principal investigator of an Economic and Social Research Council (ESRC) Future Research Leaders project examining scientific capacity building and evidence-based policy making in the Ugandan Parliament, k.holden@qmul.ac.uk

² Originally trained as a medical doctor, Nele Jensen is currently a PhD candidate in the Department of Sociology at Goldsmiths, University of London. Her research is supported by the ESRC and focuses on the making and dissemination of evidence through a specific global health ‘evidence-informed policy network’, n.jensen@gold.ac.uk

Crane, J. T. (2013) *Scrambling for Africa: AIDS, Expertise and the Rise of American Global Health Science*, Ithaca, NY: Cornell University Press

Michael, M. and Rosengarten, M. (2013) *Innovation and Biomedicine: Ethics, Evidence and Expectation in HIV*, New York: Palgrave Macmillan

At a recent Global Health conference, the plenary speaker, Melissa Leach, made the following observation: “If the Ebola epidemic of 2014-15 has marked a defining moment for global health, highlighting inescapably the threats unleashed by dynamic bio-socialities in interconnected and unequal worlds, it has also been a defining moment for anthropology’s position and contribution”. For Leach, the ‘Ebola moment’ calls for scholars across the social sciences and humanities to cut into the dominant paradigm of biomedicine and health science that currently undergirds global health.

While social scientists continue to query the concrete nature – or very existence of – global health (Brown et al. 2010, Fassin 2012), the ever-multiplying conferences, journal titles, degree programmes, experts, policies and so on, testify to its persistence as an enduring and dominant framework through which the everyday realities and vitality of world populations are known and intervened upon. Social scientists and humanities scholars have been at pains to critique the methods, epistemologies and effects of global health (Biehl and Petryna 2013, Mold and Reubi 2013, Petryna 2009), and yet questions persist about the best ways to engage with its intricate machinery.

The authors illustrate the complexities and tensions inherent in global health programmes and interventions, staying empirically close to practitioners and researchers working across intricate webs of internationally networked institutions, clinics and research centres. Crane’s book *Scrambling for Africa* attends to the architecture of global health and its administrative scaffolding. Crane refers to global health as a juggernaut (2013, p. 149), alluding to what often appears to be its unstoppable and irresistible force. Unstoppable because global health absorbs an ever-growing number of networked institutions, programmes, experts, and policies that extend its global reach and influence. Irresistible, because it attracts growing numbers of practitioners that are driven by humanitarian concerns, but arguably also by the availability of auspicious funding opportunities. And yet, the juggernaut metaphor implies that global health can be destructive; as both monographs under review caution, global health also erases, crushes, brushes aside forms of knowledge and ways of living that do not readily comply with its prevailing imperative for objective, measurable, and cost-effective solutions, and its overall mission to improve the health and wellbeing of world populations.

Crane specifically draws our attention to the span of international collaborative networks and their implicit politics of exclusion. But exclusion is also the key concern of Michael and Rosengarten's *Innovation and Biomedicine*, which analyses efforts to standardise biomedical tests and treatments according to internationally sanctioned 'gold standard' criteria, and the consequent tensions this creates for practitioners on the ground. While global health often takes on the appearance of an unstoppable 'juggernaut' (Crane, p.149), both books expose the tensions and contradictions involved in the spread of global scientific networks and setting of gold standards, and thus carve out new and innovative social science critiques.

Global scientific networks and the new scramble for Africa

The central thesis of Crane's book is that the growth of global health programmes emanating mainly from the Global North "both generates and relies upon" (p. 7) conditions of poverty and disease in the Global South. Crane's study cuts into conceptual debates about what counts as global health by arguing that while talk of equal partnerships is prevalent amongst practitioners (Koplan et al 2009), there is a lacuna in our understanding of how projects and the entailed collaborative relationships actually take shape. In addressing this gap, Crane focuses her study on HIV and AIDS research in Uganda. Her primary case study reports on the expansion of the Immune Wellness Clinic (which is a pseudonym) in Mbarara, southeast Uganda, which over ten years went from a single shipping container to a functioning medical laboratory subsumed within a larger donor-funded research infrastructure.

The title of the book is itself telling, referring to the Berlin Conference in the late nineteenth century when European countries initiated a 'scramble for Africa' in which they competed for shares in the continent's land and resources. The beginning chapters set-up the premise that global health represents a somewhat similar scramble, but it is bodies and their biovalue that are framed as having untold resource to universities in the Global North, and in effect in securing the health and wellbeing of global populations. Indeed, Crane uses the rather unfortunate language of Africa as "fodder" (p. 7) for global health research, albeit in later more ethnographic chapters she offers a more nuanced perspective by chronicling the collaborative networks and knowledge flows that are part of global health in the making.

The current 'scramble for Africa' can be seen in the global fight against HIV/AIDS, which Crane argues has been progressively shaped by the conjoined efforts of private philanthropic capital and publicly funded research agendas. The initial denial of antiretrovirals to African populations - despite escalating HIV infection rates - has given way to large-scale internationally funded health intervention programs guided by humanitarian concerns. At the same time, global health research increasingly relies on previously neglected, and thus 'treatment naive', African bodies in order to test the efficacy of newer drugs. What Crane concludes is that it has become difficult to tear apart basic research from targeted interventions; in global health they are often intertwined.

There is the scent in these initial chapters of Tilley's *Africa as Living Laboratory* (2011) but written in a contemporary moment and concerned more with the biomedicalisation of poorer populations in the epistemological regimes of the Global North. However, like Tilley, Crane seeks to admonish any notion that global health is a well-oiled machine operating effortlessly to enroll bodies, identities and communities in its processes. Instead, she skillfully shows how global health progresses and indeed emerges through continual struggle and chafing at the level of individual programmes and the collaborative networks they generate. She makes two important observations that bring together her main theoretical influences of medical anthropology and science and technology studies (STS). One observation concerns

the setting up of laboratories and the other, the recent expansion of global health degree programmes in mainly Northern Universities.

Long the mainstay of STS, the laboratory takes on different qualities in an African context serving as a highly visible sign of philanthropy and as such an expression of inequality. While laboratories and their technological kits are often donated, they usher in new epistemological orders that mute other ways of doing biomedical research. Crane approaches the laboratory as a boundary object that binds research and health interventions, while also contributing to a more divisive separation between international circuits of scientific capital and the geographically anchored status of Ugandan researchers, doctors and patients. As Crane herself states “the geography of laboratories is the geography of scientific networks” (p. 105). By this, she means that while laboratories represent the arrival of global health programmes and carry much of its promissory capital, they form nodes in the global transfer of biological data.

Staying true to STS, Crane argues that laboratories are sites of extraction and translation, and it is through these practices that historical inequalities between the Global North and South are reproduced. Labs are ultimately invested in enabling the mobility of some epistemologies, objects and people, which necessarily anchors others in place, contributing to what Malkki argues is a ‘sedentarist metaphysics’ (cited in Crane 2013, p. 148). In the context of the Wellness Clinic, Crane found disgruntlement amongst Ugandan researchers and doctors who complained that they were readily positioned as recipients of donor funds rather than as equal partners who participate in and enjoy the rewards of the scientific networks they help to sustain.

The second important observation she makes is about the growth of degree programmes, research centres and institutes dedicated to global health. The political economy of higher education – in the form of increased commercialisation, impact agendas, research audit and managerial cultures - looms in the background of Crane’s study and there is work to be done tying economic changes in higher education to the emergence of global health. Crane might well be correct in arguing that from inside the halls of rich, powerful universities a new ‘scramble for Africa’ is underway.

As a faculty member at the University of Washington, Crane finds herself in the business of global health and she appears in these final chapters to be grappling with its paradoxical dimensions. In locating herself critically in response to the growing demand for global health degrees and research projects, she reaches out beyond the academy to policy makers, practitioners and university managers with the take home message that “...if global health wishes to truly make strides towards its ethic of equitable partnership, the field must make a more genuine effort to grapple with the unequal terrain on which it operates and which ultimately serves as its condition of possibility” (p. 171).

Clinical trials and the struggle for global standards

Mike Michael and Marsha Rosengarten’s book *Innovation and Biomedicine* (2013) also focuses on off-shore HIV RCTs (Randomised Controlled Trials) as instantiations of globalising biomedicine. And, like Crane, Michael and Rosengarten show how biomedicine is interwoven with asymmetries in wealth, health and medical infrastructure. On the one hand, these are key drivers of the globalisation of biomedicine, providing not only the targets for new HIV interventions but also the (treatment-naïve) bodies for new HIV research. But on the other hand, biomedicine struggles to address divergences in its continuous strive for universal scientific methods, standardised regulatory protocols and one-size-fits all remedies. It is this quest for uniform solutions in biomedical research and its adverse consequences that are at the center of Michael and Rosengarten’s analysis, leading them to speculate on

how biomedical innovations might be imagined otherwise to engender more ethical and effective interventions.

Michael and Rosengarten focus their study on HIV pre-exposure prophylaxis (PrEP). Based on a 2-drug combination (tenofovir/emtricitabine) already routinely used as part of drug regimen to treat HIV infection, PrEP was approved by the US Food and Drug Administration (FDA) in 2012 for the prevention of HIV infection in specific HIV-negative but at-risk groups. FDA approval and PrEP's inclusion in US federal clinical practice guidelines rested on the evidence from a number of clinical trials¹, many of which were conducted outside the US. Michael and Rosengarten use the example of PrEP to explore how biomedical intervention are 'eventuated' across various settings.

'Eventuation' is the central conceptual device developed throughout *Biomedicine and Innovation*. Informed by the concept of the event as articulated by Whitehead and further conceptualised by Deleuze, Stengers, and Fraser (see e.g. Fraser 2009), Michael and Rosengarten use eventuation to describe the situated and relational coming into being of entities such as PrEP and challenge reductionist accounts of biomedical innovations. The concept of eventuation is articulated through two complementary chapters that offer contrasting descriptions of PrEP RCTs as either closed or open events and offer a provocative methodological contribution to ongoing social science debates concerning the 'becoming' of entities.

In the first of these twinned chapters, 'The gold standard', Michael and Rosengarten illustrate how biomedicine treats both RCTs and PrEP as distinct and singular entities that unproblematically circulate the globe. RCTs are seen as the gold-standard methodology of biomedical knowledge production that validate PrEP as a universally-applicable innovation to prevent HIV infection. However, Michael and Rosengarten argue that 'gold-standardness' can never be realised in specific trials or in a specific pill. Instead, it only exists as an abstract external criteria that solicits, among other things, objectivity and comparability. Yet, it is by being oriented towards this ideal that specific RCTs and PrEP are eventuated as singular entities.

The specific processes leading to this singularisation of RCTs and PrEP include quantification and bifurcation. According to Michael and Rosengarten, quantification techniques retain only those aspects of RCTs and PrEP that can be measured and compared across different settings, protocols and bodies. Bifurcation occurs when everything deemed disruptive to the attainment of 'gold standardness' is stripped away, including what could be understood as the particular social contexts in which both trials and pill-taking take place. Michael and Rosengarten point to the distinction between the 'efficacy' and 'effectiveness' of PrEP as indicative of the bifurcation between 'biomedical' and 'social' (p.82). Efficacy is determined by evidence of the 'true' workings of a drug in standardised research settings and 'controlled' patient groups. In contrast, effectiveness is demonstrated by showing that drugs work in 'real-life' patients and diverse locales – which are thus treated as providing merely supplementary knowledge of already scientifically-validated drugs (see p. 5).

When efficacy is sought as the 'external criterion' against which PrEP is evaluated in RCTs, Michael and Rosengarten argue that PrEP is then eventuated as a uniform and abstracted entity that can fulfil these criteria – or in the words of Brives (2013: 412) "the clinical trial as a scientific experiment *generates both the results and the objects required to obtain these results*". If attaining gold-standardness eventuates PrEP as the solution to problems of comparability and transferability, then can it prevent HIV infection in situated and often 'messy' settings? While Michael and Rosengarten arrive at this question through their critique

¹ See

<http://www.fda.gov/NewsEvents/Newsroom/PressAnnouncements/ucm312210.htm>

of quantification and bifurcation, it is in the successive chapter that they develop a far more radical reimagining of how PrEP could be eventuated otherwise if we modified our conception of scientific experiments by considering their multiple and relational dimensions.

Here they contrast eventuations of RCTs and PrEP as singular, quantitative and standardised with an examination of RCTs and PrEP as multiple, qualitative, and 'open'. A key conceptual tool they propose is the notion of 'anti-attractor'; at the same time that the strive for gold-standardness constrains scientific experiments, it also opens up new possibilities as it "orients the RCT event towards alternative prospects, precipitating 'counter-reactions' and the likely actualization of unanticipated elements of the RCT PrEP event" (p.107).

Revisiting their empirical material, Michael and Rosengarten describe how experts struggle to achieve the abstracted standards of trial design and deliverables. Similar to Crane, Michael and Rosengarten describe how the seamless appearance of gold standardness conceals the tensions experienced by researchers and clinicians who manage trials on the ground. They refer to these as situated and 'qualifying' challenges: for example, trial participants might adhere less to treatment regimen than expected, taking PrEP might change participants' sex practices or might affect gender relations, lower-than-expected adherence might lead to virus resistance. As experts try to obtain standardised trial results in defiance of these challenges, both RCTs and PrEP become open to contestation and adaptation. In other words, attempts to standardise become 'generative' of new and unexpected problems that need to be worked out in situ (p.127). As a result, rather than being understood as singular and sealed-off entities, RCTs are shown to be multiple and relational in that they 'emerge-with' the things that go into their eventuation.

By playfully teasing out the relational ontologies of RCTs and PrEP, Michael and Rosengarten ultimately invite us to radically reconsider the role of scientific experiments in HIV drug research, and even biomedicine more broadly. Instead of viewing PrEP RCTs as gold-standard solutions to pre-defined problems (p.17), they suggest reimagining them as situated and open experimental events that allow working through complexities and new problems as they arise. What exactly such a reimagined RCT might look like, or how it might be successfully incorporated into current biomedical practices, is left to the reader's speculation. Yet, the real strength of Michael and Rosengarten's book is their teasing out in these two central chapters of the performative character of knowledge practices.

From under the wheel of the juggernaut: new approaches in social science critique

Both books attend to the unexpected dimensions of global health, critiquing not only the recapitulation of long-standing power relationships, but also the veneer of global health as operating smoothly and seamlessly. In their focus on two key building blocks – global scientific networks and research standards – the authors highlight how the appearance of a smooth veneer belies the highly contextualized tensions through which global health programmes and initiatives operate. While this highlights the fragile architecture of the self-professed field of global health, both books seem to go a step further by suggesting that any allusion to a 'global health' is ultimately a smokescreen that conceals the (neo-)imperial tendencies that continue to steer the political economy of knowledge production.

The authors deploy social science to bring empirical insight to the messy and tension ridden ways in which global health gets done in practice, but they also question why the complexity of these practices does not figure in the political deliberations of dominant multinational scientific, health and philanthropic organisations as anything other than external obstacles to be erased and overcome. Why does complexity, multiplicity and tension not figure more creatively in the socio-technical imaginations of global health? And

moreover, what are the ethics of this exclusion? This brings us back to the question raised by Leach concerning the role and contributions of social science in global health.

The international response to the Ebola epidemic actively sought to include social scientists, especially anthropologists, in implementing interventionist and containment measures. For many, this involvement signalled an acknowledgement of the value of applied social science to the work of organisations such as the World Health Organisation. For others, the excitement of being invited to the big league of policy-interventions has given way to an 'Ebola-induced hangover' (Menzel and Schroven, 2016), brought on by increasing frustrations at being enrolled as service providers to help smooth over the implementation of pre-determined 'good' interventions and projects (Krause, 2014; Menzel and Schroven, 2016).

Indeed, global health often appears as a 'juggernaut' (Crane, p.149) whose composite institutions and corporations, biomedical epistemologies and targeted research-interventions are constitutive of new calculable spaces at the expense of other ways of being and knowing. While these calculable spaces engender standardised and universalised regimes of knowledge, they also form part of a self-referential system that serves to justify the perpetual need for global health. Both books cut into these calculable spaces by making visible the tensions, multiplicity and relationality of any knowledge-making activity. These qualities are often treated as incidental or arbitrary to the overall aims of global health, rather than part of its fabric. By bringing our attention to these tacit and often invisible aspects, the authors pose more urgent ethical questions about how global health ought to be done, by whom and for whom.

In Crane's parting words to policy communities she asks that they acknowledge the dialectics of global health in reproducing the world they seek to remedy. In a similar vein, Michael and Rosengarten craft an innovative critique that serves to augment the relevant contributions of social science in questioning the problems that we want 'global' and 'evidence-based' health interventions to address. As such, both books encourage contributions from social science that continue to interrogate the world-making potential of global health. The authors demonstrate that this is the real strength of social science - that in its embrace of difference and heterogeneity it can reimagine any onto-epistemological enterprise - and when it comes to global health, they also make this their ethical imperative.

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